REMARKS

The foregoing Amendment and Remarks which follow are responsive to the Office Action mailed August 30, 2010 in relation to the above-identified patent application.

In that Office Action, the Examiner rejected Claims 1-12 under 35 U.S.C. §103(a) as being unpatentable over the Ochi et al. reference (U.S. Patent No. 6,149,713).

Independent Claim 1 is Not Rendered Obvious by the Ochi Reference

In its current form, independent Claim 1 describes the wet dust collector of the bypass system as being operative to remove sulfur included in the bled gas by allowing the sulfur dioxide in the combustion gas to react with calcium hydroxide which is generated when the calcium oxide in the fine particles of the dust of the bled gas reacts with water, to generate gypsum. Applicant respectfully submits that at least these features of independent Claim 1 are not taught or suggested by the cited Ochi et al. reference.

Some of the beneficial effects of the bypass system recited in amended Claim 1 are best explained in the third paragraph of page 3 of the patent application, reproduced below for the Examiner's convenience.

> *With this invention, since dust in the bled gas containing fine particles is collected by using a wet dust collector, collected slurry can be supplied to a water treatment/desalination apparatus as it is, which eliminates a rinsing apparatus conventionally used in desalting process of chlorine bypass dust, resulting in reduced equipment cost. Solvent used for the wet collection is liquefied substance such as water and slurry containing water, which is able to collect dust and the like in the bled gas. In addition to the above, with the present invention, the cooling of the bled gas and the collection of the chlorine bypass dust are simultaneously carried out by the wet dust collector, which eliminates conventionally installed cooler and hot bag filter, and a large scale storage facility, which is conventionally required for chlorine bypass dust with low specific gravity, resulting in remarkably reduced equipment cost. Further, sulfur dioxide (SO2) in the combustion gas is desulfurized in such a manner that the sulfur dioxide (SO2) reacts with calcium hydroxide (Ca (OH) 2), which is generated when calcium oxide (CaO) in the fine particles of the*

> *dust of the bled gas reacts with water, to be gypsum. Then, the gypsum is discharged out of the cement kiln system, and is effectively utilized in cement mill.*

As understood, the Ochi et al. reference relates to a flue gas treating process which extracts and discharges dust and sulfur dioxide from the flue gas of a coal-fired boiler. Untreated flue gas discharged from a coal-fired boiler undergoes a two-step cooling process, wherein the gas is first cooled to 120-160°C, and is subsequently cooled to 80-110°C. After being cooled, the flue gas is introduced into a dry electrostatic precipitator, wherein dust is removed from the flue gas. The flue gas leaves the electrostatic precipitator and is received by a combined type desulferizer where sulfur dioxide is removed by absorption, and dust is also capture and removed. Thereafter, the remaining flue gas is discharged as treated flue gas.

The Examiner concedes that the Ochi et al. reference does not teach using the apparatus disclosed therein with a cement kiln. However, the Examiner argues that the Ochi et al. reference does teach that the raw materials produced by the apparatus can be used in cement manufacturing. Specifically, the Examiner refers to column 7, lines 40-45 of the Ochi et al. reference, which have been reproduced below.

> *In dust solid D6, dust arising from flue gas and consisting essentially of fly ash is contained at a high concentration. For example, this dust solid D6 is solidified and dumped, or utilized as a raw material for the manufacture of cement. Alternatively, clear liquid H may be directly returned to absportion tower tank 14 and reused as a liquid component constituting the slurry.*

The Examiner concludes by stating that "[s]ince this apparatus generates cement making materials, the Examiner is substantially interpreting this system to read on a cement kiln."

Applicant respectfully disagrees that the Ochi et al. reference teaches or suggests each and every limitation of Claim 1. More specifically, ***the Ochi et al. reference does not disclose a system for use as a cement kiln exhaust treatment system.*** The Examiner

acknowledges this deficiency, but appears to argue that since the Ochi et al. apparatus may be used to generate cement making materials, that one skilled in the art may use it as a cement kiln exhaust processing system. Applicant submits that the conclusion asserted by the Examiner is the result of impermissible hindsight and is not within the purview of one skilled in the art. Along these lines, there is no suggestion or motivation in the disclosure of the Ochi et al. reference that would cause one skilled in the art to modify the teachings of the Ochi et al. reference to produce a cement kiln exhaust treatment system. ***Simply because the Ochi et al. reference mentions that some of the byproducts of the Ochi et al. system may be used in the manufacture of cement does not mean the Ochi et al. system may be used to treat cement kiln exhaust gas***. The Ochi et al. reference is silent with regard to treatment of cement kiln exhaust gas.

Rather, the Ochi et al. reference is related to the unrelated technology of treating flue gas from a coal-fired boiler. In this regard the Ochi et al. reference merely discloses desulfurization of gases exhausted from coal fired boilers through a wet lime/gypsum desulfurization method.

Conversely, the system recited in Claim 1 applies wet dust collection to a chlorine bypass system to provide the following benefits: elimination of a rinsing apparatus conventionally used in the desalting process of chlorine bypass dust; the collection of dust and the like in the bled gas; the elimination of conventionally installed cooler and hot bag filters, and a large scale storage facility, which is conventionally required for chlorine bypass dust with low specific gravity; desulfurization of sulfur dioxide in the combustion gas; and effective utilization of the gypsum discharged out of the cement kiln system.

Therefore, Applicant submits that the Ochi et al. reference does not render obvious the system recited in Claim 1. As such, Claim 1 is believed to be allowable, as are all claims depending therefrom.

Independent Claims 7 and 12 are Not Rendered Obvious by the Ochi et al. Reference

Independent Claims 7 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Ochi et al. reference.

Independent Claims 7 and 12 are similar to Claim 1 in that they all relate to a system or method of treating cement kiln combustion gas. Therefore, to the extent that independent

Claims 7 and 12 are similar to independent Claim 1 discussed above. Applicant submits that the Ochi et al. reference is deficient for the reasons advanced above in relation to Claim 1. In particular, the Ochi et al. reference relates to an apparatus for treating flue gas from a coil fired boiler, whereas the claimed systems and method relate to treatment of cement kiln combustion gas.

Therefore, the Ochi et al. reference does not teach, suggest or make obvious all of the limitations of independent Claims 7 and 12. Thus, Claims 7 and 12 are believed to be allowable, as are all claims depending therefrom.

Conclusion

In view of the foregoing, the application is believed to be in condition for allowance. Entry of the amendments and issuance of a Notice of Allowance is therefore respectfully requested. Should the Examiner have any suggestions for expediting allowance of the application, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

If any additional fees as due, please charge Deposit Account 19-4330.

Respectfully submitted,

Date: 11/29/10

By: _____

Customer No.: 007663

Mark B. Garred
Registration No. 34,823
STETINA BRUNDA GARRED & BRUCKER
75 Enterprise, Suite 250
Aliso Viejo, California 92656
Telephone: (949) 855-1246

MBG/MIZ

I:\Client Documents\NAKAI\005us\Amend OA 08.30.10.doc